UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,245	04/16/2004	Thomas Bonald	0546-1069	7770

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/825,245	BONALD, THOMAS
	Examiner	Art Unit	
	Diego Herrera	2617	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 April 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 4/16/2004 was filed.

The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the

information disclosure statement is being considered by the examiner.

Specification

Applicant is reminded of the proper language and format for an abstract of the

disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a

separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed

150 words in length since the space provided for the abstract on the computer tape used by the

printer is limited. The form and legal phraseology often used in patent claims, such as "means"

and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist

readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information

given in the title. It should avoid using phrases which can be implied, such as, "The

disclosure concerns," "The disclosure defined by this invention," "The disclosure

describes," etc.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaponniere et al. (US patent 6449490 B1), and in view of Pankaj (US publication 20020183066 A1), and in view of Bolgiano et al. (US patent 6366568 B1).

Regarding claim 1, (original) Chaponniere et al. discloses a method of selecting at least one transmission channel from a plurality of transmission channels (abstract, col. 2 lines: 42-49, col. 6 lines: 40-45, Chaponniere teaches selecting from two different channels), in a time division multiple access protocol, characterized primarily in that it consists in:

• However, Chaponniere et al. does not specifically teaches receiving for each channel a periodic indication of the transmission quality of that channel, however, Pankaj does teach limitation (paragraph [0036]-[0037], Pankaj teaches continuously monitoring of channel quality). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made by Chaponniere et al. to specifically include

receiving for each channel a periodic indication of the transmission quality of that

channel as taught by Pankaj for the purposes of scheduling calls (abstract).

• However, Chaponniere et al. does not specifically teaches storing these indications for

each channel during a time window, nevertheless, Bolgiano et al. does teach the

limitation (col. 23 lines: 19-23, 28-35; Bolgiano et al. teaches time window for

measurement and storing message of measurement); therefore, it would have been

obvious to a person of ordinary skill in the art at the time the invention was made by

Chaponniere et al. to specifically include storing these indications for each channel

during a time window, as taught by Bolgiano et al. for the purposes cost effective (col. 5

lines: 44-45).

• selecting at least one channel that has the best current transmission quality indication

position relative to the transmission quality indications stored for that channel during the

time window (col. 7 lines: 22-39, Chaponniere et al. teaches selecting a channel out of a

plurality of channels with best/high quality).

Consider claim 2. (original) Method of selection according to Claim 1, characterized in

that the step of selecting at least one channel is carried out from a plurality of channels

(paragraph [0036]-[0037], Pankaj teaches continuously monitoring of channel quality)

over which data are to be transmitted and from these channels at least one channel that

has the best or amongst the best current transmission quality indication position(s) (col.

7 lines: 22-39, Chaponniere et al. teaches selecting a channel out of a plurality of

channels with best/high quality) relative to the transmission quality indications stored for

that channel during the time window (col. 23 lines: 19-23, 28-35; Bolgiano et al. teaches

time window for measurement and storing message of measurement).

Consider claim 3. (currently amended) Method according to Claim 1, characterized in

that it consists, during a step (SO), in determining the number of channels N (col. 7

lines: 22-39, Chaponniere et al. teaches selecting a channel out of a plurality of

channels with best/high quality), the size of the time window T and the initial values of

the transmission qualities of each channel during the time window and in that these

parameters (col. 23 lines: 19-23, 28-35; Bolgiano et al. teaches time window for

measurement and storing message of measurement) may be updated by interrupting

the method at moments chosen by a re-initialization finite state machine, particularly

when the number of channels N changes due to the activity of the users (col. 23 lines:

19-23, 28-35; Bolgiano et al. teaches time window for measurement and storing

message of measurement).

consider claim 4. (original) Method according to Claim 3, characterized in that it consists

in executing, during each unit of time, the said series of instructions consisting in:

- Executing a loop (B1) to determine for each channel (2_i) the position
  (Pi) of the current transmission quality indication relative to those stored
  for that channel during the time window (col. 23 lines: 19-23, 28-35;
  Bolgiano et al. teaches time window for measurement and storing
  message of measurement);

- selecting, during a step (S5), from the channels for which data are to be transmitted at least one channel (2_j) that has the best or amongst the best value (s) (Pj) (col. 7 lines: 22-39, Chaponniere et al. teaches selecting a channel out of a plurality of channels with best/high quality);

- during a step (S6), giving transmission authorization at least to the channel (2 j) (col. 23 lines: 19-23, 28-35; Bolgiano et al. teaches time window for measurement and storing message of measurement).

Consider claims 5-7. (original) Method according to Claim 4, characterized in that the loop (BI) consists, for each channel (2 i, where i is from 1 to N), in:

- acquiring, during a step (SI), a transmission quality indication of the channel (2 i), that is Ci(t) (paragraph [0036]-[0037], Pankaj teaches continuously monitoring of channel quality);

- initializing, during a step (S2), a value of position Pi at I (abstract, Bolgiano et al. teaches space diversity atntennas);

- executing a second loop (B2) in order to determine a value indicative of the position (Pi) (col. 7 lines: 22-39, Chaponniere et al. teaches selecting a channel out of a plurality of channels with best/high quality);

- executing a third loop (B3) in order to update the transmission quality indications of the channel (2 i) during the time window (col. 23 lines: 19-23, 28-35; Bolgiano et al. teaches time window for measurement and storing message of measurement).

Consider claim 8. (original) Method according to Claim 7, characterized in that a
convention such as a random choice is applied to the step (S4) when several active
channels have a minimum indication of position (Pi) (col. 7 lines: 22-39, Chaponniere et
al. teaches selecting a channel out of a plurality of channels with best/high quality).

Consider claim 9. (currently amended) Method according to <u>Claim 7</u>, characterized in
that if several channels are authorized to transmit simultaneously, the step (S4) consists
in selecting from the channels for which data are to be transmitted those that have the
best position (Pi) and in that a step (S5) consists in giving transmission authorization to
those channels (col. 23 lines: 19-23, 28-35; Bolgiano et al. teaches time window for
measurement and storing message of measurement).

Consider claim 10. (original) Method according to Claim 6, characterized in that the
second test (T2) executes a predetermined convention to compute the indication of
position (Pi) when the current transmission quality indication of the channel, that is Ci(t),
is equal to one or more values of the time window (col. 23 lines: 19-23, 28-35; Bolgiano
et al. teaches time window for measurement and storing message of measurement).

Consider claim 11. (currently amended) Method according to <u>Claim 5</u>, characterized in
that the loops (BI, B2, B3) are, partially or wholly, processed in parallel and not
sequentially (abstract, Bolgiano et al. teaches channel diversity).

Consider claims 12 and 14. (currently amended) Communication system using the

method of <u>claim 1</u>, characterized in that it comprises:

• a method for receiving, for at least one channel, a periodic indication of transmission

quality of that channel (col. 7 lines: 22-39, Chaponniere et al. teaches selecting a

channel out of a plurality of channels with best/high quality);

•a memory for storing the transmission quality indications of each channel during a time

window (col. 23 lines: 19-23, 28-35; Bolgiano et al. teaches time window for

measurement and storing message of measurement);

•a computing circuit to determine, for each channel for which a periodic indication of

transmission quality has been received, the position of the current transmission quality

indication of that channel relative to those stored for that channel during the time

window (paragraph [0036]-[0037], Pankaj teaches continuously monitoring of channel

quality);

•a circuit for selecting at least one transmission channel that has the best current

transmission quality indication position relative to those stored for that channel during

the time window (col. 23 lines: 19-23, 28-35; Bolgiano et al. teaches time window for

measurement and storing message of measurement).

Consider claim 13. (original) Communication system according to Claim 12,

characterized in that the circuit for selecting at least one transmission channel

comprises a means of selecting channels over which data are to be transmitted and that

have the best or one amongst the best current transmission quality indication position

(s) relative to the positions stored for that channel or those channels during the time

window (col. 23 lines: 19-23, 28-35; Bolgiano et al. teaches time window for

measurement and storing message of measurement).

Consider claim 15.(currently amended) Communication system according to <u>Claim 12</u>,

characterized in that it comprises at least one memory (A2) consisting of T blocks, each

block (A2.k) containing the Value of transmission quality of the channel (2 i) on the date

(t-k), that is Ci(t-k), where k is from 1 to T (col. 12 lines: 1-11, Chaponniere et al.).

Consider claims 16 and 17.(currently amended) Communication system according to

<u>Claim 12</u>, characterized in that it comprises at least one set (A3) of at most T

comparison circuits, each circuit (A3.k) comparing the current transmission quality

indication contained in at least the circuit (AI) with the transmission quality indication on

the date t-k contained in the memory block (A2.k), where k is from 1 to T (col. 12 lines:

1-11, Chaponniere et al.).

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Diego Herrera whose telephone number is (571) 272-

0907. The examiner can normally be reached on 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DH

GEORGE ENG
SUPERVISORY PATENT EXAMINER